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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/802,869  | 03/18/2004  | Hiraku Murayama      | 018961-067          | 5448             |
| 21839 7590 11/12/2008<br>BUCHANAN, INGERSOLL & ROONEY PC<br>POST OFFICE BOX 1404<br>ALEXANDRIA, VA 22313-1404 |             |                      |                     |                  |
| EXAMINER  |             |                      |                     |                  |
| HOEKSTRA, JEFFREY GERDEN  |             |                      |                     |                  |
| ART UNIT  |             | PAPER NUMBER         |                     |                  |
| 3736  |             |                      |                     |                  |
| NOTIFICATION DATE   |             | DELIVERY MODE        |                     |                  |
| 11/12/2008  |             | ELECTRONIC           |                     |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com



### Office Action Summary

**Application No.**

10/802,869

**Applicant(s)**

MURAYAMA ET AL.

**Examiner**

JEFFREY G. HOEKSTRA

**Art Unit**

3736

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 October 2008.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.  
4a) Of the above claim(s) 3, 6-9, 11 and 15-25 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1, 2, 4, 5, 10, 12-14 and 26-32 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 18 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_



## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/06/2008 has been entered.

### ***Notice of Amendment***

2. In response to the amendment filed on 10/06/2008, amended claim(s) 1 and 12-14 is/are acknowledged. The current rejections of the claim(s) 1, 2, 4, 5, 9, 10, 12-14, and 26-32 is/are *withdrawn*. The following new and reiterated grounds of rejection are set forth:

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of



the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 2, 4, 5, 10, 12-14, and 26-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Skujins et al. (US 2003/0069520 A1, hereinafter Skujins) in view of Ishida et al. (US 6,328,822 B1, hereinafter Ishida).

6. For claims 1, 4, 5, 10, 12-14, and 26-32, Skujins discloses a guide wire (10), comprising:

- a distal end side portion (as best seen as the portion of element 16 extending off the right-side of Figures 1-3) having a proximal end and formed of a first metallic material comprising a Ni-Ti based alloy (paragraph 15);
- a proximal end side portion (as best seen as the portion of element 14 extending off the left-side of Figures 1-3) having a distal end and formed of a second metallic material comprising stainless steel (paragraph 14), wherein stainless steel is inherently higher in rigidity than a Ni-Ti based alloy and thus said proximal end side portion is higher in rigidity than said distal end side portion (paragraphs 14-15); and
- an intermediate portion (20) provided between said distal end side portion and said proximal end side portion (as best seen in Figures 1-3), said intermediate portion being a cylindrical filamentous portion having a circular cross-section and being a



thin wire (paragraphs 13-15), said intermediate portion having a proximal end and a distal end (as best seen in Figures 1-3), wherein a distal end (16) of said intermediate portion is formed of said first metallic material and a proximal end (14) of said intermediate portion is formed of said second metallic material (paragraphs 14-15), and said intermediate portion being (20) formed of a metallic material mixture (paragraphs 12 and 21-27) containing said first metallic material and said second metallic material (paragraphs 16-21),

- wherein said intermediate portion (20) (paragraphs 16-25 and 27) (as best seen in Figure 4) comprises a weight ratio of said first metallic material in the metallic material mixture decreases from the distal end side portion toward the proximal end side portion and a weight ratio of said second metallic material increases along the length thereof from the distal end side portion toward the proximal end side portion (paragraphs 16-25 and 27) so as to define a nonuniform composition along a length of said metallic material mixture (as best seen in Figure 4),
- wherein said distal end of said intermediate portion is joined to a terminal end of said proximal end of said distal end side portion by welding (paragraphs 27-28) (as best seen in Figure 4) and said proximal end of said intermediate portion is joined to a terminal end of said distal end of said proximal end side portion by one of welding, soldering or brazing (paragraphs 27-28) (as best seen in Figure 4) such that said distal end side portion and said proximal end side portion do not overlap (as best seen in Figure 4),



- wherein said intermediate portion is capable of being formed by a sintering of a first powder of the first metallic material and a second powder of the second metallic material
7. For claim 2, Skujins discloses a guide wire, wherein the weight ratio of said second metallic material in the metallic material mixture in said gradient physical property portion increases stepwise (paragraph 17) from the distal end side toward the proximal end side (paragraphs 16-25).
8. For claims 30-32, Skujins discloses a guide wire, wherein said intermediate portion is capable of being formed by sintering a metallic material mixture comprising a powder of said first metallic material and a powder of said second metallic material.
9. Thus for claims 1, 4, 5, 10, 12-14, and 26-32, Skujins discloses the guide wire as set forth and cited above, except for expressly disclosing the intermediate portion comprises an integral gradient compositions portion having a predetermined length in which a weight ratio of the first metallic material in the metallic mixture decreases and a weight ratio of the second metallic material in the metallic material mixture increases along the length of the intermediate portion, from the distal end side portion towards the proximal end side portion.
10. Ishida teaches a guidewire (as best seen in Figure 7), comprising *inter alia*: a distal portion (4) formed of a first metallic material (beta phase positively recited in column 7 lines 45-65), a proximal portion (3) formed of a second metallic material (dual phase region as best seen in Figure 2 and in column 7 line 66 – column 8 line 9), and an intermediate portion (2) therebetween, wherein said intermediate portion comprises



an integral gradient composition portion (2a,2b,2c,2d) having a predetermined length (as best seen in Figure 7) in which a weight ratio of a first metallic material in a metallic mixture decreases and a weight ratio of the second metallic material in the metallic material mixture increases along the length of the intermediate portion (as best seen in Figures 2 and 7) (column 9 lines 1-25), from the distal end side portion towards the proximal end side portion (as best seen in Figure 7).

11. The claimed invention would have been obvious because the substitution of one known element for another would have yielded predictable results to one of ordinary skill in the art at the time of the invention. Because both Skujins and Ishida teach a guidewire having an intermediate portion with varying flexibility, it would have been obvious to one skilled in the art at the time of the invention to substitute one intermediate portion for the other to achieve the predictable results of providing an intermediate portion of a guidewire having varying flexibility.

### ***Response to Arguments***

12. Applicant's arguments filed 10/06/2008 with respect to claims 1, 4, 5, 10, 12-14, and 26-32 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY G. HOEKSTRA whose telephone number is



Art Unit: 3736

(571)272-7232. The examiner can normally be reached on Monday through Friday 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571)272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J.H./

Jeff Hoekstra

Examiner, Art Unit 3736

/Max Hindenburg/

Supervisory Patent Examiner, Art Unit 3736